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The Investor Indonesia Behavior on Stock Investment Decision Making: Disposition Effect, Cognition and Accounting Information

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Abstract

The purpose of this study was to investigate the influence of the disposition effect, the influence of aspects of cognition, the interaction effect of the disposition effect and cognitive aspects of the treatment of accounting information for investment decisions in the stock market. In order to better know the different levels of risk and the level of confidence in men or women in making decisions to invest in the stock market. The method uses a quasi-experimental study 2x2x2 Randomized Block (RB-222) ANOVA and ANCOVA Within-Subject Design. Block design is formed of many frequencies simulated stock trading using virtue trade program. Block most frequent transactions in block 1 and seldom frequent transaction undertake in block 8. The population of domestic individual investors and quasi experimental subjects consisted of 120 individual investors, 70 from Jakarta City, 33 from Semarang City, and 17 from Yogyakarta City. The results of this research showed there is a disposition effect before and after treatment of accounting information, there is a tendency to release their winner stock faster than losser stock. Aspects of cognition tend toward risk taker and overconfidence after a given treatment accounting information. There is interaction between the effects of dispositions, aspects of cognition (level of risk and level of confidence), and accounting information. These interactions give rise to behavioral neuroselling within the individual investor.

Keywords: investor behavior, disposition effect, level of risk, level of confidence, accounting information, quasi experiment, gender, neuro-selling behavior

1. Introduction

1.1. The Issues and Motivations

Phenomena that exist on the capital market is the investor in making a decision essentially for profit. This can be seen in 2008 when the global financial crisis, the Indonesian Capital Market decreased or bearish, visible from Composite of 1,355.41 (decreased by 50.64% from the previous year), the sale of 11,876 million domestic investors (7.20%) is smaller than purchasing transactions 12,119 million (10.29%). That is, there is the behavior of investors to hold stocks than sell the stock loss. The different behavior seen during the Indonesian capital market or a bullish rise in 2009 and 2010. In 2009, Composite has increased by 2,534.36 (up by 86.98% from the previous year), the sale of domestic investors 19,127 million (61.06%) is greater than purchase transactions amounted to 19.125 million (57.81%). Similarly in 2010, Composite is still an increase of 3,703.51 (an increase of 46.13% from the previous year), the sale of domestic investors for 23,058 million (20.55%) is greater than purchase transactions amounted to 22,887 million (19.67%). This means that there are behavioral investors to sell shares rather than hold shares winner. Event shows the behavior of the disposition effect on domestic investors.

Investor behavior has been observed by previous researchers, and their findings emphasize the influence of psychological, economic, and social environment on the resulting decisions. Preliminary findings, beginning with the discovery of Prospect Theory by Kahneman and Tversky (1979), later developed by Shefrin and Statman (1985) produces behavioral disposition effect. Disposition effect is an effect that shows the behavior tendency of investors to sell their shares quickly at a profit, or that it suffered a loss on stock, investors will hold the stock. Shefrin and Statman (1985) research and then further developed by Odean (1998). His studies on the effects of dispositions produce formulas that are often used by other studies on the effects of disposition. Disposition effect is growing and exciting to research. Some are adding other factors that influence the disposition effect with a variety of methods, from descriptive methods, surveys, and experiments, all of which strengthen or weaken the effects of this disposition. Prospect theory (Kahneman and Tversky, 1979) describes the tendency of investors to sell their shares when obtaining winner and hold while experiencing losser. This is due to the gain region investors would prefer to realize profits by sell those stocks. This behavior is an attitude of risk aversion. In the area of investor losses do not like to realize losses, by hold the shares. This behavior is an attitude of risk seeking.

Cognitive psychology is concerned with how knowledge can be represented in the mind. Cognitive

psychology is the science of the processing of information, in other words science grappling with how to obtain and process information, and then saves and processed by the brain, then think and languages, finally to behaviors that can be observed (Solso et al., 2008). The conceptual model also captures important variables in financial decision making, such as the attitude of the risk and time preferences. The attitude of the risks (risk averse, risk neutral, and risk taker) is affected by competition and collaboration between cognitive and affective systems (Lovric et al., 2008). Cognitive system is assumed to be at risk with a probability that will happen. The attitude of the risks of forming a reluctant behavior of the risk, because it is driven by fear and anxiety due to the risks and pain will be stored at the time of a loss. This correlation may be influenced by the gender and personality aspect.

In general, women have a special ability, first; women naturally worried about her safety, and therefore they were not reluctant to ask for directions or advice, and like to absorb a lot of information. Natural impulse is closely aligned with the strategy of investing in the stock market, where investors are required to seek investment advice and gather a lot of information before deciding to buy or sell stocks. Secondly, women also have an instinct or a higher sensitivity, and better understand the cycle. This ability is also very necessary to invest in the stock market. In addition to making the analysis of a stock investor must be sensitive and good at reading trends. Stock market investors must keep track of and understand the cycle of stock price fluctuations (Graham et al., 2002).

All phenomena and the results of previous studies made variable disposition effect, risk attitudes, beliefs, accounting information, and gender is an important variable to make the decision making process. Accounting information and capital markets investor acquired, will be kept in mind, and then released back into action trading decisions. Therefore, this thesis will look at cognition of individual investors in making investment decisions in Indonesia Capital Market

1.2. The Objective

Generally, this study aims to investigate the influence of the behavior of individual investors on capital market investment decisions.

1.3. Development of the Hypotheses

1.3.1. Relationships Design Disposition Effect on Stock Investment Decision Making

Prospect theory (Kahneman and Tversky, 1979) test will increase the power of decision-making preferences as a function of objective outcome value (objective value generated). The prospect theory to evaluate the advantages and disadvantages of individual investors who have acquired. When the investment returns earned negative, asymmetrical shape to reflect the fear of loss. Risk aversion tends to gain regional and local governments tend to be risk seeking loss. Therefore, investors will tend to hold shares in the loss very long, otherwise investors will tend to lose share in the gain immediately.

Prospect theory is the basis of the disposition effect. Kausita (2010) said that the disposition effect is a combination of prospect theory with individual emotional capital market. Disposition effect arises because no investor preferences and beliefs of different individuals, as well as the psychological bias that occurs when trading in the stock market. Besides this, testing the effect of dispositions by Odean (1998) produced a formula that can be used by the research further disposition effect. Formula tested the effect of dispositions to investors who hold shares of investment loss for too long and sell winning stocks too early investments. Actual winner shares more have a strong preference of the stock loss.

Kothari (2001) in his study said that there is a relationship between the stock market with the financial statements. The financial statements are used to perform fundamental analysis. Fundamental analysis using financial ratios to predict future profitability, forecasting using time-series analysis and forecasting. As a result, the ratios can predict revenue growth. The amount of available ratios, predicts also trading strategy to exploit information about revenue growth. Signal predicted revenue also produces abnormal returns. Kothari (2001) also said market players continually expose information, ranging from quantitative financial data, financial news media, social opinions, and recommendations. If all the information is processed, the information can be a complex thing, so it is not surprising that during the process of making a decision many practitioners in the stock market using heuristics. Frazzin (2006) tested the effect of the disposition of individual investors who hold shares of loss (loss) and put through the profit realized on stocks (gain) by entering the market reaction (underreaction) because they perusahaanm action news like earnings announcements. This dissertation will provide accounting information that is often seen by the individual investor As with rule of thumb such as earnings per share (EPS), price earnings ratio (PER), price to book value (PBV), return on equity (ROE), and debt to equity (DER) (Fact Book, 2011). Based on this background, it constructed hypothesis, as follows:

H1: The average equity investment decision-making is different for the disposition effect before and after the given accounting information given accounting information. There is a main effect between the proportion Realized

gains and poroportion Realized loss.

Notation: H1. Disposition Effect: $\mu\, ED_{NIA} \neq \mu\, ED_{IA}$

1.3.2. Relationships Design Cognitive Aspects Level of Risk on Stock Investment Decision Making

Cognition is a mental activity, involving acqusition, storage, information retrieval, and use of knowledge. If humans use every day cognitive effort, they will get some information and cognition more clearly because it uses a broad perspective in the mental process. Cognition also has an approach; the cognitive approach is often associated with some behavioral perspective, which emphasizes observation of behavior (Matlin, 1989). Lovric, et al. (2008) provide a model of cognition that investors distinguish between cognitive and affective. Cognitive distinguished cognitive can be controlled and can not be controlled or automatic. Cognitive attitude can be controlled is the risk (consisting of risk aversion, risk neutral, this would risk), goals (consisting of preferences, goals, and constraints investor), and strategies (consisting of securities analysis, fundamental analysis, technical analysis, securities selection , asset allocation, optimizing portfolios, performance evaluation, and revision of the portfolio). The process is controlled by serial (step-by-step), causing deliberate, causing feelings, and accessible to introspection. Cognitive system is assumed to face the risk probability will happen. The attitude of the risks of forming a reluctant behavior of the risk, because it is driven by fear and anxiety of the consequences of the risk occurring and grief are stored at the time of a loss.

Thaler (1999) said that mental accounting is a cognitive operation that is usually used by individuals in a household to manage, evaluate, and financial activities. Research on mental accounting by Tversky and Kahneman (1981) have been conducted in Indonesia by Adhikara (2008), however, there are differences in the cases used in the survey, that there is an adjustment to the state of the Indonesia Stock Exchange. As a result investors in Indonesia tend to be neutral in choosing a positive frame. But it would be risk takers when the frame turned negative. In other words, investors Indonesia prefers to choose risky alternatives than the alternative without risk. Besides this, the investor Indonesia mental accounting suggests investors are not able to incorporate financial information separately. Based on this background, it constructed hypothesis, as follows:

H2: The average stock investment decisions differently for given levels of risk before and after the accounting information given accounting information. There is a main effect between the risk takers with risk averse.

Notation: H2. Risk Level**:** $\mu\, TR_{NIA} \neq \mu\, TR_{IA}$

1.3.3. Relationships Design Cognitive Aspects Level of Confidence on Stock Investment Decision Making

Matlin (1989) also said that cognitive psychology has two meanings, namely cognition and psychology. Cognitive psychology has several approaches, the cognitive approach is often associated with some behavioral perspective, which emphasizes observation of behavior; approach psychoanalytic perspective, which emphasizes unconscious emotions; approach humanist perspective, which emphasizes personal growth and interpersonal relationships. Dissonansi cognitive theory by Festinger (1956) says there are people sensitive to inconsistencies between actions (action) and beliefs (beliefs), there is a repetition of inconsistency will result dissonansi cognition, and there dissonansi motivate the individual to deal with it. Dissonansi will be dealt with changes in beliefs, change actions, and changes in the perception of action. Three ways (change beliefs, change actions, and changes in the perception of action) may reduce the cognitive dissonansi. Changes in beliefs, is an easy way to menangai dissonansi between actions and beliefs. When someone decides to cheat, but the basic beliefs, menyotek was not good. In addition, the basic beliefs and attitudes actually rather stable, people will not change the basic beliefs, attitudes, and his opinion every day. This will further strengthen the belief base, since people see many things in predicting events and perform structuring thoughts. Ekholm (2006) found the majority of investors to sell the stock at the time after earing positive suprise and vice versa when buying stocks after negative earnings suprise. Many investors exhibit different behavior on the part of investors. This shows appear on the circumstances of individual investors overconfidance earnings suprise. Based on this background, it constructed hypothesis, as follows:

H3: The average stock investment decisions differently for given confidence level before and after the accounting information given accounting information. There is a main effect between overconfidance with confidance.

Notation: H3. confidence level $\mu\, TK_{NIA} \neq \mu\, TK_{IA}$

1.3.4. Relations Disposition Effect Design, Cognitive Aspects, and Accounting Information on Stock Investment Decision Making

Shefrin and Statman (1985) said the prospect theory in it includes attitudes do not like the risk, self-control and mental accounting. This explains the behavior of individual investors in making investment is influenced by three variables. The results are consistent with studies conducted by Tversky and Kahneman (1981), Adhikara (2008). When given positive framing, investors will be risk averse (do not like the risk), the longer the investor will hold the investment, and the higher control is done. Conversely, when given negative framing, investors will tend to be risk

takers (like the risk), the sooner investors dumped their investments, and the lower control does. Baker and Nofsinger (2002) examine the disposition effect using psychological factors and social, ie cognition, emotion, and the investor. Psychological factors and social influence investor decision-making. The results of his study says cognitive factors (risk and beliefs) that influence representative bias, cognitive disorder, the introduction of bias, mood and optimism, a confidence level, the status quo bias. While the emotional factors that influence the decision to invest is the disposition effect and changes in risk preferences. Then social factors such as media, interactive social, and internet influence decision making. Based on this background, it constructed hypothesis, as follows:

H4: There is an interaction effect between the Disposition Effect, Risk Level, and Level of Confidence.

Notation: H4. interaction: $ED * TR * TK$

1.3.5. Relations personality of Gender on Stock Investment Decision Making

Costa, et al. (2008) concerning the disposition effect using experimental methods but the added variable of gender. In general, gender involved in the act of taking risks (Byrnes et al., 1999). The results of their study indicate that investors do not like risk likely gains and losses tend to investors like risk. Then, taking into account gender, the study says that women investors can recall the previous price of male investors, so that the brains of men and women make significant changes to the disposition effect. Graham, et al. (2002) revealed that there are gender differences in taking a risk, women are more risk aversion or dislike risk than men. Barber and Odean (2001) found in his research that women have a different attitude towards money and investing than men.

Al-Ajmi (2011) says that the risk tolerance of the individual investor in emerging markets (Bahrain), the investor has particularly males tended to be less tolerant of risk is higher than female investors. Investors with the level of education and wealth would like to be higher risk. However, investors who have a higher age would reduce the level of risk and more likely to think about retirement. Graham, et al. (2002) revealed no differences in levels of confidence. The results suggest that women are less confident investors on financial decisions they take due to their lack of courage to take a decision (to worry about her safety), so look for more information than men. Based on this background, it constructed hypothesis, as follows:

H5: The average equity investment decision-making is different for men and women before and after a given accounting information given accounting information.

Notation: H5. gender: $\mu\, DM_{LK} \neq \mu\, DM_{PR}$

2. Research Method

2.1. Experiment Method

The study was done with laboratory experiments quasi capital markets. Quasi-experimental design was chosen because it uses data from an existing environment, the bid and offer that occurred in Indonesia Capital Market. In addition, there are independent variables that are natural and can not be manipulated, such as rule of thumb, and personality based on gender. The difference between true design-experiment and quasi-experiment is not that one is better than the other, but the difference lies in where the data was obtained. Quasi-experiment done when the independent variable already exists, and it naturally without the intervention of the experimenter (Khalik and Ajinkya, 1979; Ghozali, 2008).

Experimental design used in this study is a Randomized Block 2x2x2 factorial within-subject (RBF-222) quasi experiment. Quasi-experimental design is done because the data used comes from the bid and offer that have occurred in Indonesia Capital Market. In addition, there are independent variables that are natural and can not be manipulated, ie personality based on gender. While the within-subject performed, because the same subject will be trading for 30 minutes, which is divided into the first 15 minutes without being offered accounting information, while the second 15 minutes given accounting information. The design of these experiments using blocking remedy isolate variation associated with nuisance variables simultaneously and at the same time to test treatments and their interactions.

2.1.1. Subject

Experiement subject consist of 70 individual investors from Jakarta City, 33 individual investors from Semarang City, and 17 individual investors Yogyakarta City. The number of investors adjusted to the proportion of the number investors in those cities.

2.1.2. Design

Quasi experiments in this study through 3 stages pretest, treatments, and posttest. However, this study is within the subject, and then does the same subject posttest. Pretest is testing 2 stocks for 2-5 minutes to try software virtue Trade. Then the simulation starts, of which 15 minutes is a simulation without accounting information. 15 minutes later, the first treatments given simulation accounting information.

2. Result and Discussion

2.1. Characteristics of Subjects

The characteristics this study were 88 males (73.3%) and 32 women (26.7%) as the experimental subjects. Age less than 25 years there were 24 males (27.3%) and 13 women (40.8%). 25-34 years of age there were 24 males (27.3%) and 11 women (34.4%). Age 35-44 years there are 28 men (31.8%) and 6 women (18.8%). 45-54 years of age there are 8 men (9.1%) and 1 female (3.1%). Age over 65 years there is only one woman alone (3.1%). From all the subjects of the experiment seen men and women are under the age of 35 years, shows young investors dominate this experiment. It is also supported by the status of unmarried young investor by 49 men (55.7%) and 23 women (71.9%), making the most of their investment plans can still be allocated on the world capital markets.

2.2. Main Effect of Disposition Effect on Stock Investment Decision Making

Testing the hypothesis that there are differences in the average effect of the disposition of the shares of the investment decision-making before and after a given treatment accounting information. Results of this study showed no behavior of individual investors who quickly sell shares winner and slow to sell shares losser. The study's findings are consistent with prospect theory Kahneman and Tversky (1979) which states that the behavior of investors when positioned in the convex (the profits) will be faster realization of benefits (tend to be risk averse) than merealisaikan loss or in other words, these stocks are areas concave (the loss). Prospect theory is also often referred to as S Shape. Prospect theory was developed by Shefrin and Satman (1985) a disposition effect behavior, ie behavior quicker to sell stocks rather than sell stocks losser winner. Behavioral effects of this disposition was developed legi by Odean (1998) with a formula known as the disposition effect formula Proportion Gain Realized (PGR) and the Proportion Loss Realized (PLR). Based on the above it can be concluded that the behavior of individual investors to sell stocks winner faster than stock investors prefer losser indicate gains than losses. Accounting information is a key ingredient in the performance the company went public and the main grip for individual investors in making the investment decision-making stocks.

2.3. Main Effect of Cognitive Aspects of Risk Level on Stock Investment Decision Making

Testing the hypothesis that there are differences in the average level of risk to the investment decision-making stocks before and after treatment of accounting information. The results of this research indicate the risk level of different investors in making investment decisions stocks. There are levels of risks of which some are risk averse risk taker. The study's findings are consistent with the theory of cognitive psychology by Solso, et al. (2008) which states there diotak human information processing, and then save it, then thought to act. Cognitive psychology theory developed by Lovric, et al (2008) into a cognitive model of individual investors. Lovric, et al (2008) said that the individual investor cognitive model consists of collaboration between cognitive and affective as the attitude of the risks, investment objectives, investment strategies, personalities, beliefs, and preferences in transaction time. In addition, there are mental accounting theory developed by Thaler (1999), said that mental accounting is a cognitive operation that is usually used by individuals to organize, evaluate, and financial activities. When given the positive frame, it tends to lead to mental accounting gains comparable to the level of acceptable risk.

Unique Results from this study that investors have different trading frequencies, initially has a level of risk that is not different, but after being given treatment accounting information was there a significant difference. This means that the same accounting information given to investors, both investors who have a high-frequency trading and low risk takers to move into different risk levels significantly.

Unique results next to the level of risk in this study before any treatment is accounting information all investors trading in both low frequency and high-frequency trading, has a large standard deviation. In contrast, the level of risk given the treatment after accounting information, all investors, both on low trading frequency and high-frequency trading, having a smaller standard deviation. The findings of this unique study is in line with the model risk taking by Lampenius and Zickar (2005) says there are experiences for making the transaction risk control increases, the risk of speculative at first to be a risk that can be controlled.

2.4. Main Effect of Cognitive Aspects of Confidence Level on Stock Investment Decision Making

Testing the hypothesis that there are different average level of confidence in stock investment decisions. The results of this research indicate a level of confidence of investors vary in investment decision-making stocks. There is a level of trust there anyway overconfidance confidance. The study's findings are also consistent with the results of research DeBondt and Thaler (1984) who further developed by Cheng (2007), said overconfidance negatively impact the performance of the portfolio, because the higher the frequency overconfidance less optimal trading and portfolio performance. This is also consistent with the theory of cognitive psychology by Solso, et al. (2008) which was then developed by Lovric, et al. (2008) into a cognitive model of individual investors. Lovric, et al. (2008) said that the level of risk and the level of confidence associated with each other, the higher the risk the higher the level of trust or otherwise. Similarly, the level of risk, the level of confidence that any absorbing accounting information makes

increasing the confidence level of confidance to overconfidance.

The results of this study unique is the level of confidence for the accounting information given in the form of financial ratios, and growth in sales and profits can increase both the level of confidence of individual investors who have a high trading frequency, medium, or low. These unique results were supported by Daniel and Titman (1999), who said accounting information provide further interpretation on the share price, as well as generate overconfidance. Likewise Hartono (2004) also said that there are differences investor reaction to a series of accounting information publicized, investors are more likely to react than Earlier suprises suprises. This result was supported by result of Ekhlon (2006) who said there was a strong overconfodence behavior when earnings suprise.

2.5. Interaction of Disposition Effect Interaction, Cognitive Aspects of Risk Level and Confidence, Accounting Information for Decision Making Stock Investment

Testing the hypothesis that there is an interaction between the effect of the disposition, the level of risk, and the level of confidence in the stock investment decisions. The results of this research show the effect of the interaction between the human brain with the cognitive behavior of individual investors sell stocks quickly than winner stocks losser. This gives rise to a new term, namely neuro selling behavior. The study of behavioral finance is growing towards neurofinance. Tseng (2006), Bhakay (2011), and Frydman (2012) said neurofinance from neuroeconomic Extensive development, the developing economic and financial analyzes to apply neurotechnology. Neurofinance assume market participants have different psychological and affect rational decisions and performance in investment, so that the efficient market hypothesis (EMH) to adaptive markets hypothesis (AMH).

The uniqueness of this research can also be seen from the high-frequency trading with a low trading frequency had a mean difference in the effect of the disposition and aspects of cognitive effort. In high-frequency trading results lead to the disposition effect Proportion Loss Realized (PLR) and aspects of cognitive effort leads to the confidence level. That is, the behavior of individual investors are more concerned with the level of confidence that leads to overconfidance predictable, thus making high-frequency trading, as well as the realization of the loss of a lot done. It could be argued this behavior tends to be done by individual investors like minded traders will cut loss. At frequencies lower trading results lead to the disposition effect Proportion Gain Realized (PGR) and aspects of cognitive effort leads to the degree of risk. That is, the behavior of individual investors are more concerned with the level of risk that would make it more careful in the transaction, thus making low-frequency trading, as well as the realization of gain much done. It could be argued this behavior tends to be done by investors who like a long term investment.

2.6. Main Effect Personality of Gender on Stock Investment Decision Making

Testing the hypothesis that there are different average stock investment decisions based on gender. The results of this research indicate a stock investment decision-making between men and women are different. The differences of personality male gender tend to choose a pessimistic or optimistic, and low risk tolerance, whereas women have a high risk tolerance and are likely to have optimistic personalities. The uniqueness of this research can be seen high-frequency trading by low trading frequency before and after treatment of different accounting information on the personality of the man. That is, men have a tendency to low risk tolerance and a high, but after the accounting information to be given a high risk tolerance. These results were confirmed by the results of simulating stock eskperimen there is a tendency to get gain (69% of the total 88 male subjects of the experiment or 51% of the 120 subjects eskperimen), but after being given the question of the attitude of high profit and high risk or low profits and low risk, more are choosing statements low profit and low risk (87.5% of the total 88 male subjects of the experiment or 83.33% of the 120 subjects of the experiment). The results of this study also supported the results Adhikara (2008) on mental accounting to investors in the Indonesia Stock Exchange, saying investor preference towards financial investment can be used to explain the phenomenon of investor decisions are changed due to the negative frame, but investors will be fair or neutral back when given a positive frame.

3. Conclusions, Implication, Limitations, and Suggestion for Future Research

3.2. Conclusion

There is a main effect on the risk level of the individual investor, especially during the accounting treatment of the information provided, the behavior of individual investors tend to be risk takers. Similarly, in each block, the result can be observed almost every block increased levels of risk (TRNAI < TRAI). There is a process of thinking (cognitive aspect) is more in the transaction after obtaining accounting information, and have an increased risk tolerance, risk averse than a risk taker in next time. There is a main effect individual investor confidence, especially when accounting infomasi prlakuan given, the behavior of individual investors tend overconfidance. Similarly, in each block, the result can be observed almost every block increased level of confidence (TKNAI <TKAI). There is a process of thinking (cognitive aspect) is more in the transaction after obtaining accounting information, and have

increased expectations of share price appreciation in the next time going overconfidance other words.

There is a main effect interaction between disposition effect interaction, the level of risk, and the level of trust, occurring in quasi experimental study, due to factors indirectly disposition effect is in aspects of cognition that can be controlled, such as the attitude of the risk, stock analysis, fundamental analysis, technical analysis, stock selection, portfolio optimization, portfolio performance evaluation (cognitive model of individual investors by Lovric et al. (2008)). The interaction between the effects of interactions disposition, level of risk, and the level of confidence, is a unique outcome of this study. The result is the behavior of investors more risk takers, overconfidance, and the realization of the proportion of the gain will be greater than the proportion of loss realization.

There is a main effect interaction level of risk and the level of confidence with personality, because the risk would not be separated from the belief held by individual investors. Beside that, the level of risk and trust are complementary aspects of cognition, cognition level of risk is to be controlled, while the level of confidence that can be controlled is the affective (Lovric et al., 2008). Individual investors who rarely commit the transaction before treatment is given, they are a thinker personality tendencies. That is, investors rely more on logic, objective, and reasoning in a share purchase transaction. Unlike investors who have a tendency to do a lot of transactions, will lead to personality thinking vs. Feeling.

There is a main effect interaction effects of factors position, risk level, confidence level and personality based on gender. The results are quite interesting for the male gender, be acquired inconsistency of risk tolerance (KG3) and the level of profitability and risk level (KG4). This can be seen when the subjects eskperimen stock simulation there is a tendency to get gain (69% of the total 88 male subjects of the experiment; 51% of the 120 subjects eskperimen), but after being given the question of the attitude of high profits and high risks or low profit and low risk, more are choosing statements low profit and low risk (87.5% of the total 88 male subjects of the experiment; 83.33% of the 120 subjects of the experiment).

3.3. Implication

Theoretical implications in the field of accounting, accounting information provided to investors in the form of total assets, total liabilities, total equity, total sales or net income, total profit, total profit or loss and financial ratios such as EPS, BV, DER, PBV and PER can significantly influence the behavior of individual investors, especially factors aspects of cognition that is the level of risk and the level of confidence. Behavior of individual investors tend to be risk takers and overconfidance. Besides, Behavioral Finance Theory and Prospect Theory is the basis of the emerging theory Disposition Effect, accounting information can also provide a change of behavior, ie the behavior of individual investors are risk averse because it was faster than a stock selling shares losser winner, be a risk taker to move .

Cognitive theory expressed by the field of Psychology, Cognitive Conceptual Model developed into Individual Investors by Lovric, et al. (2008), who said there was collaboration between the cognitive and the affective, such as the attitude of the risks, investment objectives, investment strategies, heuristics, demographics, motivation, mood or feeling, personality, confidence, and time preferences in the transaction. However, in this study, not all conceptual cognitive model applied to individual investors, because the method uses a quasi-experimental study 2x2x2 Randomized Block (RB-222) to factor the effect of dispositions, aspects of cognition such as the level of risk and the level of confidence. Behavioral Finance Theory and the Cognitive Theory developed into Neurofinance. So Prospect Theory Theory Theory evolved into the Disposition Effect Theory Cognitive Neuro-selling can be behavioral.

3.4. Limitations

This study has limitations that should be considered in evaluating the results of the study as a whole, especially in the aspect of personality based on gender. The number of each cell in the quasi experiment men and women are not the same. It would be better if the number of subjects of men and women each cell together.

3.5. Suggestion for Future Research

Suggestions for further research with respect to behavioral finance research are as follows: (1) based on the limitations of the study above, researcher's next need to consider the number of participants with the same gender composition, in other words the subject of men and women have the same number per cell. (2) Quasi experimental study ANOVA and ANCOVA Within-Subject in a randomized block design is a unique research experiment, which was formed due to the block design can be used as additional research analysis. This method can be explored using the site or location do quasi experiment, so as to explore the social aspects of the behavior of individual investors. (3) The study of behavioral finance towards developing neurofinance, interactions ED-TR-TK produces neuroselling behavior can be developed further or may even develop into neurobuying behavior. This research can be done by multidiscipline the Faculty of Medicine and Faculty of Psychology.

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